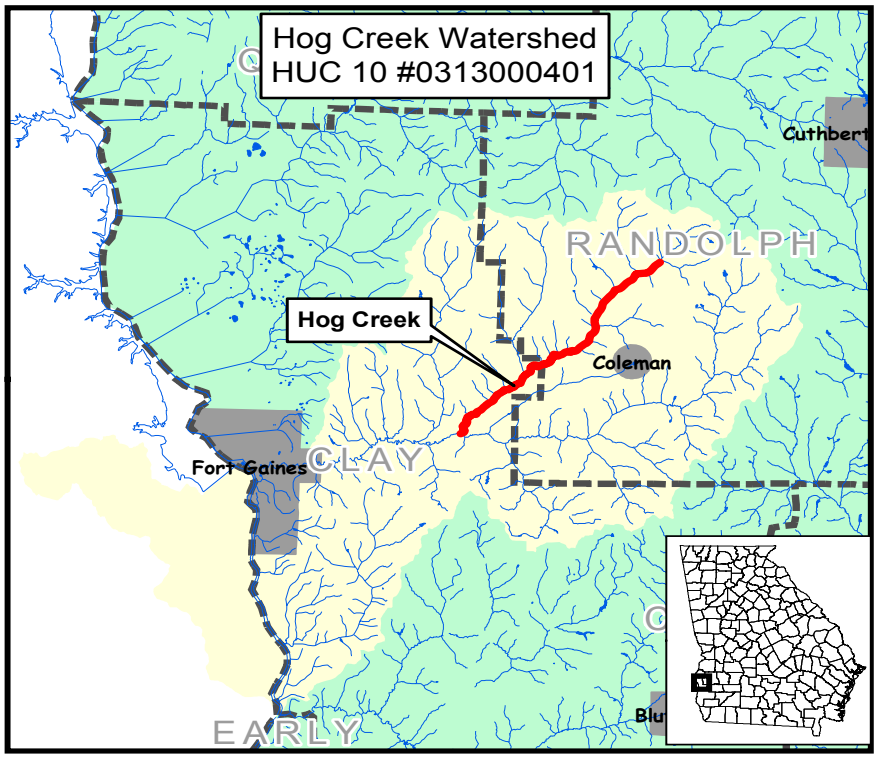
STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN

HOG CREEK
(Sediment - Biota)

Prepared by
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, GA

TMDL Implementation Plans are platforms for establishing a course of actions to restore the quality of impaired water bodies in a watershed. They are intended as a continuing process that may be revised as new conditions and information warrant. Procedures will be developed to track and evaluate the implementation of the management practices and activities identified in the plans. Once restored, appropriate management practices and activities will be continued to maintain the water bodies. The overall goal of the Plan is to define a set of actions that will help achieve water quality standards in the state of Georgia. This plan was originally prepared as an implementation inventory by the Department of Community Affairs with a Section 604(b) Grant. TMDL load allocation information has been updated to reflect the approved TMDL.



Impaired Waterbody*	Impaired Stream Location	River Basin	Miles/Area Impacted	Partially Supporting/ Not Supporting
Hog Creek	Headwaters to Cemochechobee Creek	Chattahoochee	9	Partially Supporting

STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN FOR: Hog Creek (STREAM) Biota (PARAMETER) RIVER BASIN: Chattahoochee PLAN DATE: 6-30-03

Prepared by: Perdita Holtz, AICP Lower Chattahoochee Regional Development Center Address: 1428 Second Avenue City: Columbus State: GA Zip: 31902 e-mail: pholtz@lcrdc.org Date Submitted to EPD: 6-30-03	Or Prepared By: N/A _____ Address: _____ City: _____ State: _____ Zip: _____ e-mail: _____ Date Submitted to EPD: _____

General Information

Obtain this information from the TMDL document or other information. When completed, this document will be a self-contained report independent of the TMDL document.

TMDL ID (to be entered by EPD)	
Water body name	Hog Creek
HUC basin name	Chattahoochee
HUC number	03130003
Primary county	Randolph
Secondary county	Clay
Primary RDC	Lower Chattahoochee
Secondary RDC	N/A
Water body location	Randolph and Clay Counties
Miles or area impacted	9
Parameter addressed in plan	Biota
Water use classification	Fishing
Degree of impairment	Partially supporting use X
	Not supporting use ☐
Date TMDL approved by EPA	January 2003
Impairment due to	Point sources ☐
	Nonpoint sources X
	Both ☐

Point source-Form A; Nonpoint source-Form B; Both-Form A+B+C

Significant Stakeholders

Identify local governments, agricultural organizations or significant land holders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups with a major interest in this water body.

Name/Organization	Please see attached list				
Address					
City		State		Zip	
Phone				e-mail	
Name/Organization					
Address					
City		State		Zip	
Phone				e-mail	
Name/Organization					
Address					
City		State		Zip	
Phone				e-mail	
Name/Organization					
Address					
City		State		Zip	
Phone				e-mail	
Name/Organization					
Address					
City		State		Zip	
Phone				e-mail	

FORM B

SUMMARY OF ALLOCATION MODEL RESULTS FROM TMDL DOCUMENT (existing load, target TMDL, and needed reduction)

EXISTING LOAD	**TARGET TMDL**	**NEEDED REDUCTION**
5,548 (tons/yr)	5,548 (tons/yr)	**0%**

I. IDENTIFY **NONPOINT SOURCE** CATEGORIES AND SUBCATEGORIES OR INDIVIDUAL SOURCES WHICH MUST BE CONTROLLED TO IMPLEMENT LOAD ALLOCATIONS:

List major nonpoint sources contributing to impairment including those identified in TMDL document.

SOURCE	**DESCRIPTION OF CONTRIBUTION TO IMPAIRMENT**	**RECOMMENDED LOAD REDUCTION (FROM TMDL)**
Silviculture Activities	Erosion as a result of logging activities (including logging access roads)	
Unpaved Roads	Erosion on and adjacent to dirt roads	
Crop Farming	Erosion as a result of crop farming activities	
Pasture Uses	Erosion as a result of animals using pasturelands	
Natural Erosion	Naturally occurring erosion resulting from the high erodibility of the soil types found in the watershed	
Residential Development	Erosion on and adjacent to dirt residential driveways	

II. DESCRIBE ANY REGULATORY OR VOLUNTARY ACTIONS INCLUDING MANAGEMENT MEASURES OR OTHER CONTROLS BY GOVERNMENTS OR INDIVIDUALS THAT SPECIFICALLY APPLY TO THE POLLUTANT AND THE WATERBODY FOR WHICH THE TMDL WAS WRITTEN, THAT WILL BE ACCOMPLISHED THROUGH RELIABLE AND EFFECTIVE DELIVERY MECHANISMS, AND THAT WILL HELP ACHIEVE THE LOAD ALLOCATIONS IN THE TMDL:

See the attachment for more instructions.

Existing or required regulatory actions

RESPONSIBLE GOVERNMENT, ORGANIZATION OR ENTITY	NAME OF REGULATION/ORDINANCE	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Georgia DNR EPD	Chattahoochee River Basin Management Plan	Plan to protect, enhance, and restore the waters of the Chattahoochee River Basin by monitoring, regulating, allocating, and managing land uses in the river basin.	1997	Ongoing
U.S. Environmental Protection Agency	Federal Clean Water Act, Section 404	Requires normal ongoing agricultural and silvicultural practices to adhere to BMPs and 15 baseline provisions for road construction and maintenance in and across waters of the U.S. in order to qualify for the exemptions from the permitting process.	June, 1988	Active
Georgia DNR EPD	Georgia Water Quality Control Act	Makes it unlawful to discharge excessive pollutants into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964	Active
Clay County	Soil Erosion and Sedimentation Control Ordinance	Protects water quality through sedimentation and erosion control by establishing BMPs and regulating land-disturbing activities.	May, 2001	Active
Georgia State Board of Registration for Foresters	Standards of Practice	Failure to practice professional forestry in accordance with the Standards shall constitute unprofessional conduct and be grounds for disciplinary action	1991	Active

Randolph County	Wetland Protection Ordinance	Establishes boundaries around wetlands within the county and limits types and density of development to protect water quality and habitats within these areas.	January, 2000	Active
Randolph County	Ground Water Recharge Area Ordinance	Establishes requirements to manage land use within significant groundwater recharge areas.	October, 2000	Active
City of Coleman	Wetland Protection Ordinance	Establishes boundaries around wetlands within the county and limits types and density of development to protect water quality and habitats within these areas.	2000	Active
Clay County	Ground Water Recharge Area Ordinance	Establishes requirements to manage land use within significant groundwater recharge areas.	No later than 2/28/06	Required in 2006

Existing voluntary actions

RESPONSIBLE ORGANIZATION OR ENTITY	**NAME OF ACTION**	**DESCRIPTION**	**ENACTED OR PROJECTED DATE (mm/yy)**	**STATUS**
Georgia Forestry Commission	Forestry Water Quality Program	Includes development of BMPs, BMP education programs, and monitoring for BMP compliance	1978; manual updated 6/99	Active
University of Georgia – Cooperative Extension Service	Promotion of Soil and Water Conservation in Agriculture	Provides classroom instruction, basic and applied research, consulting assistance, and information for nonpoint source water quality impacts	N/A	Active
Georgia Soil and Water Conservation Commission	Agricultural Nonpoint Source Management Lead Agency	Develops nonpoint source management programs and conducts educational activities to promote protection of land and water devoted to agricultural uses	1937	Active
Natural Resources Conservation Service (NRCS)	Financial/Technical assistance to agricultural uses	Includes standards and specifications for agricultural BMPs. Implements Environmental Quality Incentives Program, Conservation Reserve Program, and Small Watershed Program	N/A	Active

Additional recommended regulatory or other measures which should be implemented to reduce the loads of the TMDL parameter

ENTITY/ORGANIZATION RESPONSIBLE	NAME OF PROPOSED REGULATION/ORDINANCE/ OTHER	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Georgia Forestry Commission	Better Education and Enforcement of BMPs	GFC should better educate the forestry industry about BMPs and needs to enforce the use of BMPs. If BMPs are being used, and used correctly, and erosion is still occurring, then new BMPs that address the problem of erosion need to be developed.	Unknown	Unknown
Property owners in partnership with regulatory agencies	Buffering and BMPs	Abide by Agricultural/Forestry BMPs	TBA	Not Active
Citizens of Randolph County with Georgia EPD	Adopt-A-Stream Program	Establish an Adopt-A-Stream program in Randolph County.	TBA	Not Active
Citizens of Clay County with Georgia EPD	Adopt-A-Stream Program	Establish an Adopt-A-Stream program in Clay County.	TBA	Not Active
Randolph County	Maintenance of unpaved roads and roadside ditches	Evaluate procedures for maintaining unpaved roads and roadside ditches and utilize the publication entitled Recommended Practices Manual, A Guideline for Maintenance and Service of Unpaved Roads as a guide to making changes in current procedures	TBA	Proposed
Clay County	Maintenance of unpaved roads and roadside ditches	Evaluate procedures for maintaining unpaved roads and roadside ditches and utilize the publication entitled Recommended Practices Manual, A Guideline for Maintenance and Service of Unpaved Roads as a guide to making changes in current procedures	TBA	Proposed

III. SCHEDULE FOR IMPLEMENTING MANAGEMENT MEASURES OR OTHER CONTROL ACTIONS:

These must be implemented as expeditiously as practicable within five years of when the implementation plan is accepted by EPA.

IMPLEMENTATION ACTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
Form stakeholders group	X				
Organize implementation work with stakeholders and local officials to identify remedial measures and potential funding sources	X				
Identify sources of TMDL parameter	X	X			
Develop management programs to control runoff including identification and implementation of BMPs (Phase I): Agriculture	X	X			
Forestry	X	X			
Urban	X	X			
Mining	N/A				
Organize and implement education and outreach programs		X	X		
Detect and eliminate illicit discharges		X	X		
Evaluate additional management controls needed			X		
Monitor and evaluate results			X	X	X
Reassess TMDL allocations			X	X	
Provide periodic status reports on implementation of remedial activities	X	X	X	X	X
If needed, begin process for Phase II (next 5 years) and subsequent phases					X

IV. PROJECTED ATTAINMENT DATE AND BASIS FOR THAT PROJECTION:

The projected attainment date is 10 years from acceptance of the implementation plan by EPA.

V. MEASURABLE MILESTONES:

- Number of management controls and activities already implemented ____13_____

- Number of management controls and activities proposed in five-year work program ____6_____

- Number of management controls and activities actually implemented in five-year work period _____(to be completed after 5 years)

- Stream sampled to identify areas of concern See monitoring plan

- Other _____ _____

- Other _____ _____

VI. MONITORING PLAN:

Monitoring data that placed stream on 303(d) list will be provided if requested.

Describe previous or current sampling activities or other surveys to detect sources or to measure effectiveness of management measures or other controls.

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
DNR – Wildlife Resources Division	2000	IBI/IWB	Evaluate health of the biological system.	Completed. Future testing date to be determined.

Describe any planned or proposed sampling activities or other surveys. (Scheduled EPD sampling can be found in the Basin Planning document.)

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
EPD	2004 or 2005	All elements/ pollutants normally tested.	basin planning - individual water bodies have not yet been chosen	Scheduled

VII. CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE:

- % concentration or load change (monitoring program)

- Categorical change in classification of the stream (delisting the stream is the goal)

- Regulatory controls or activities installed (ordinances, laws)

- Best management practices installed (agricultural, forestry, urban)

COMMENTS

Hog Creek

Watershed Survey

Introduction

Hog Creek is located predominantly in Randolph County, Georgia. The lower one-third of Hog Creek is located in Clay County where it drains into Cemochechobee Creek. The creek is approximately 10.7 miles long with a watershed area of approximately 20,745 acres. The majority of the watershed is located in Randolph County with the westerly reaches of the watershed in Clay County. (See Hog Creek Watershed Area Map).

Hog Creek is listed on the 2000-2001 Section 303(d) list as partially supporting designated uses. The water use classification of Hog Creek is "fishing." Nine (9) miles of the creek, from its Headwaters to Cemochechobee Creek, has been identified as having biota impacts. The creek was tested on June 29, 2000 and received an IBI Score of 28 (Poor) and an IWB Score of 5.7 (Poor). The testing site was located where Randolph County Road 15 crosses Hog Creek. This site is approximately midway between the creek's headwaters and its confluence with Cemochechobee Creek.

The testing data indicates that "sediment appears to be negatively affecting the fish community in Hog Creek. Fish numbers were low (49 fish in a stream with a 15 square mile watershed), which is probably a reflection of poor quality pool habitat (majority were shallow and filled with sand) as well as overall high sediment deposition."

Lower Chattahoochee RDC staff performed a detailed "windshield survey" of the watershed in April and May 2003 to determine current land uses in the watershed.

Land Use and Roads

The predominant land use in the Hog Creek watershed is silviculture (tree farming) and, to a much lesser extent, crop farming and pasture uses for cattle. The most developed portion of the City of Coleman is also located in the watershed. Coleman, a small city with a population of 149 people, is comprised predominantly of residential uses.

Scattered rural residential uses are found in the watershed with residential development typically forming a pattern of three to six homes grouped together with significant distance between groupings. Randolph/Clay High School is also located in the watershed on Highway 266, just east of Coleman. In addition, one commercial use, an antiques store, is located off of County Highway 164, east of Randolph County Road 15.

County Highway 164 traverses the watershed's northern limit. County Road 32, which is unpaved, defines the watershed's eastern limit. Highway 266 delineates the watershed's southern limit and Bethel Church Road is the watershed's western limit. Bethel Church Road is paved within Clay County and has several residential uses along it within Clay County. The northern stretch of Bethel Church Road is located in Randolph County and

it is unpaved. There is no development along the portion of Bethel Church Road located in Randolph County.

In addition, Randolph County Road 15, a paved road, crosses the watershed at approximately the midpoint of the watershed. The testing sampling point was located where Randolph County Road 15 crosses Hog Creek. There are also two unpaved public roads in the watershed that provide access to farmland and timberland. These two unpaved roads are not heavily traveled. A third unpaved public road located in Clay County provides access to a cemetery. Access to twelve residential structures just west of County Road 15 is provided by a paved road.

There are several gated unpaved private ways in the watershed that provide access to timberland. Large portions of the watershed are managed for timber purposes and have been logged in recent years. Erosion on and adjacent to logging roads used to access the timber is evident. Erosion on much of the logged land can also be seen.

Soils and Slope

Soils in the Hog Creek watershed consist of the Cuthbert, Shubuta, and Boswell variety; the Faceville, Greenville variety; the Fuguay, Lakeland variety; the Ocilla, Stilson, Pelham variety; the Tifton, Norfolk, Troup variety; and the Vaucluse, Lakeland variety. Bibb, Freshwater, and Swamp soil types are found immediately adjacent to the waterways. The watershed has been soil-mapped in detail. The detailed maps, on file with the NRCS office, show that large portions of the watershed are comprised of highly erodible or potentially highly erodible soils. The following table depicts the soil types and erodibility class of soils found in the watershed:

Soil Name	Erodibility Class
Ailey Loamy Sand, 5 to 25% Slope	Highly Erodible
Bonneau Loamy Sand, 0 to 5% Slope	Not Highly Erodible
Faceville Sandy Loam, 2 to 5% Slope	Potentially Highly Erodible
Grady Clay Loam	Not Highly Erodible
Greenville Sandy Clay Loam, 0 to 2% Slope	Not Highly Erodible
Greenville Sandy Clay Loam, 2 to 5% Slope	Potentially Highly Erodible
Henderson Cherty Sandy Loam, 2 to 8% Slope	Highly Erodible
Kinston-Bibb Complex, Frequently Flooded	Not Highly Erodible
Lakeland Sand, 0 to 8% Slope	Not Highly Erodible
Lakeland Sand, 8 to 17% Slope	Highly Erodible
Lucy Loamy Sand, o to 8% Slope	Not Highly Erodible
Nankin-Esto Complex, 2 to 5% Slope	Potentially Highly Erodible
Nankin-Esto Complex, 5 to 35% Slope	Highly Erodible
Ocilla Loamy Sand, 0 to 2% Slope	Not Highly Erodible
Orangeburg Loamy Sand, 0 to 5% Slope	Not Highly Erodible
Orangeburg Sandy Loam, 5 to 8% Slope	Potentially Highly Erodible

Rains Sandy Loam	Not Highly Erodible
Red Bay Loamy Sand, 0 to 5% Slope	Not Highly Erodible
Troup Sand, 0 to 5% Slope	Not Highly Erodible
Troup Sand, 5 to 8% Slope	Potentially Highly Erodible
Troup Sand, 8 to 15% Slope	Highly Erodible

Large portions of the watershed have a slope of over 8% (see Slope Maps).

Conclusions

Sediment loading appears to be the most likely source of biota impacts in Hog Creek. Large portions of the watershed have soil types that tend to be highly erodible. Extensive silviculture activities appear to have caused significant erosion in the watershed. Crop farming and pastureland for cattle are also likely potential sources of sediment in the Hog Creek watershed. In addition, some erosion can be attributed to the lack of paving or gravel on residential driveways and unpaved roads. Because of the high erodibility of soils in the watershed, it is likely that even relatively minor human activities could cause erosion on a level not seen in areas with more stable soil types.